Data Summary Sheet for Science
Inquiry Construct

Student: **Fredrik** **Grade**: 11

Science	**Structured Performance Task 11-1** **Description:** Student will demonstrate the Inquiry Construct within a science investigation, which includes observing/questioning, planning, conducting and analyzing.								**Inquiry Construct Description: ANALYZING** Use evidence to support and/or justify interpretations and/or conclusions or explain how the evidence refutes the hypothesis.			
	Domain: **LS** AAGSE# LS1.1.1 Distinguish between living and non-living things.				Domain: **ESS** AAGSE# ESS2.1.1 Identify the major effects the sun has on the earth.				Domain: **PS** AAGSE# PS 1.4.1.d Identify two or more physical changes.			
	Collection Period 1 Oct. 6– Nov. 14, 2008				**Collection Period 2 Jan. 12 – Feb. 6, 2009**				**Collection Period 3 March 16 – April 9, 2009**			
Date	10/15	10/19	10/23		1/16	1/23	2/01		3/17	3/26	4/8	
Data Type	DP	DP	SDF		DP	DP	SDF		SDF	DP	DP	
Accuracy %	100	80	100		100	100	100		100	95	100	
Independence %	80	90	55		100	80	50		75	90	100	
Levels of Assistance				Average				Average				Average
Verbal Prompt %	0	0	45	15	0	20	50	23	0	10	0	3
Gestural Prompt %	20	10	0	10	0	0	0	0	25	0	0	8
_____ Prompt %	0	0	0	0	0	0	0	0	0	0	0	0
Average % for Collection Period	Accuracy: 93				Accuracy: 100				Accuracy: 98			
	Independence: 75				Independence: 77				Independence: 88			

Least to Most Assistance

Data Type Key: DP= Data Point SDF=Student Documentation Form

Student Documentation Form for Science
Inquiry Construct

☑ Check box if Student Product or Photo Evidence Documentation form is attached.

Student Name: Fredrik	**Grade:** 11	**Date:** 10/23	**Data Collection Period:** 1_X__ 2___ 3___

Science Domain: (LS) ESS PS

Structured Performance Task (SPT)# : 11-1

Description: Student will demonstrate the Inquiry Construct within a science investigation, which includes observing/questioning, planning, conducting and analyzing.

Inquiry Construct Description: ANALYZING
Use evidence to support and/or justify interpretations and/or conclusions or explain how the evidence refutes the hypothesis.

WITHIN AAGSE # LS1.1.1
Description: Distinguish between living and non-living things.

Describe the four components of the SPT/science investigation (observe/question, plan, conduct, and analyze) as they are embedded in the instruction of the AAGSE:

The class is currently working on a unit on determining if something is a living or non-living thing. The students participated in the science investigation as follows:

OBSERVE/QUESTION: Researched the characteristics of living things (grow, move, and reproduce), and non-living things by looking on the internet. The students observed photos of 5 objects on a website and discussed the characteristics they observed.

PLAN: Based on what they learned through their research, the students planned the objects/photos of objects they would "test" and developed a chart including whether an object grows, moves, and reproduces to capture their findings.

CONDUCT: Conducted the experiments on their objects with a lab partner; using manipulative cards and then converting these into a Lab Report Data sheet.

ANALYZE: Analyzed their findings and discussed their reasoning for charting the object as "living" or "non-living". After completing the experiment, the students concluded if their hypothesis was correct or incorrect by reviewing their hypothesis chart and marking whether their theory was correct or not correct based on their evidence.

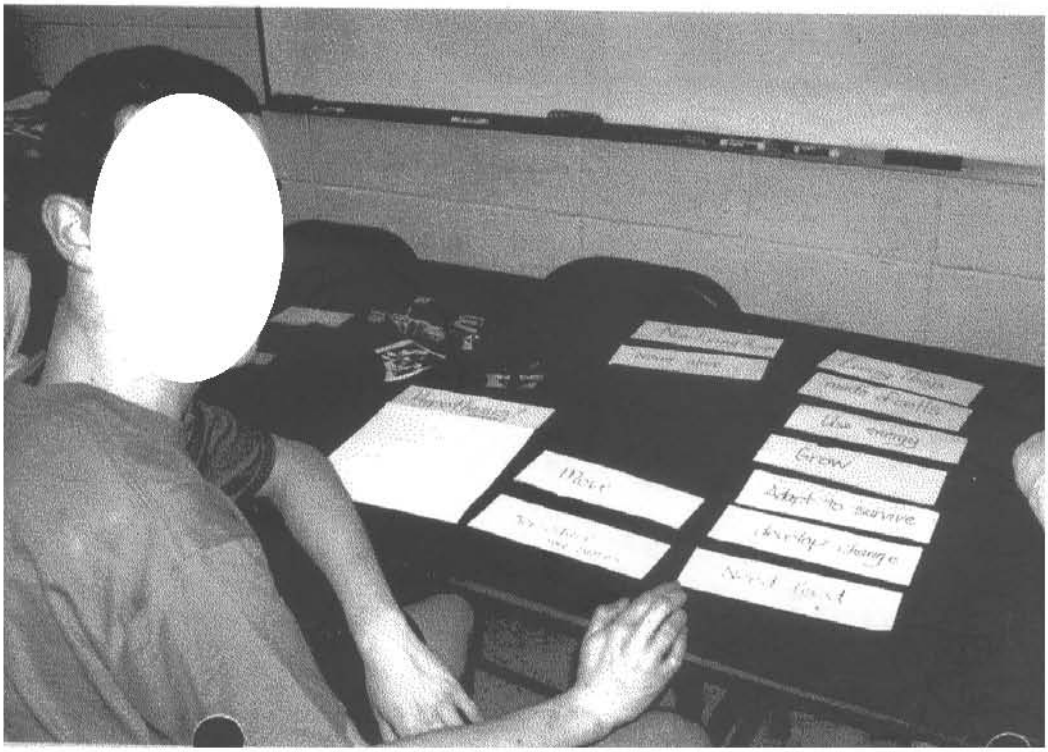
Describe the student's application of the assessed Inquiry Construct within the science investigation: Fredrik had nine objects to investigate and he used the data on his chart to determine if his hypothesis on whether the object was living/non-living was correct. He recorded whether or not the object could grow, move, and reproduce on his chart. Based on this data he determined if the object was living or non-living.

Evaluation of Student's Performance

Evaluate the student's accuracy performance on the Inquiry Construct. Explain how percentages were determined.	**Evaluate the student's independence performance on the Inquiry Construct. Explain how percentages were determined.**
Fredrik was given 9 objects to investigate, and was accurate in using his evidence to determine whether his hypothesis was correct in each of the 9 objects, giving 100% accuracy.	Fredrik needed verbal prompts to use evidence to assist with determining correctness of his hypothesis for 4 objects (45%), and was independent in 5 objects (55%).
Level of Accuracy 100 %	**Level of Independence 55 %**

Teacher Initials SD

RIAA Photo Evidence Documentation
Inquiry



Explain the student's participation in applying the AAGSE.

Fredrik is using his evidence (the charts he completed during conducting) to determine whether his hypothesis (the paper on the left) was correct on whether his objects are living or non-living. He needed verbal prompts for using his evidence to determine if his hypothesis was correct for 4 objects but was independent in 5 objects.

Student Name: Fredrik

Date: 10/23/2007

SPT #: LS: **11-1**

AAGSE: LS 1.1.1
Distinguish between living and non-living things

Teacher Initials: *SD*

Student Documentation Form for Science
Inquiry Construct

☐ Check box if Student Product or Photo Evidence Documentation form is attached.

Student Name: Fredrik	**Grade:** 11	**Date:** 2/01	**Data Collection Period:** 1__ 2_X__ 3___

Science Domain: LS (ESS) PS

Structured Performance Task (SPT)# : 11-1

Description: Student will demonstrate the Inquiry Construct within a science investigation, which includes observing/questioning, planning, conducting and analyzing.

Inquiry Construct Description: ANALYZING
Use evidence to support and/or justify interpretations and/or conclusions or explain how the evidence refutes the hypothesis.

WITHIN AAGSE # ESS2.1.1
Description: Identify the major effects the sun has on the earth.

Describe the four components of the SPT/science investigation (observe/question, plan, conduct, and analyze) as they are embedded in the instruction of the AAGSE:

Fredrik's class is involved in a science class within his school community. The class is working on The Greenhouse Effect and it principles, and vocabulary. The students participated in the science investigation as follows:
OBSERVE/QUESTION: During this experiment, the students observed a greenhouse and discussed how the sun affected the greenhouse.
PLAN: To learn about the effects of the greenhouse, they planned to make a small greenhouse with a box, determined where to put their box greenhouse, and how they would record their data.
CONDUCT: Students made 2 greenhouses each and recorded the data from each greenhouse (placed side by side). Students were given a chart to record their temperature data in the classroom and in their greenhouse, and whether the sun was out every day.

ANALYZE: After the experiment was completed, the students analyzed the results of their findings. The students examined the relationship between the increase of the average daily temperature and the increase in the temperature in their simulated greenhouse (convection).

Describe the student's application of the assessed Inquiry Construct within the science investigation:

Fredrik made a hypothesis about the greenhouses – he thought that the sun would make the greenhouse temperature warmer, and when the sun was not out, the greenhouse temperature would be cooler. After the experiment, Fredrik was evaluated on his ability to use his chart evidence to refute/support his hypothesis using the data from each of his two greenhouses.

Evaluation of Student's Performance

Evaluate the student's accuracy performance on the Inquiry Construct. Explain how percentages were determined.	**Evaluate the student's independence performance on the Inquiry Construct. Explain how percentages were determined.**
Fredrik looked at the data he collected and drew a conclusion that his hypothesis was incorrect for both of his greenhouses data--the temperature stayed warm in the greenhouses even when the sun was not out. Even though his hypothesis was incorrect, he accurately used his data to refute his hypothesis, resulting in 100% accuracy in using his data.	Fredrik required the following levels of assistance to use this evidence: he was independent in using the data from one greenhouse and needed verbal prompting for the other greenhouse. His level of independence was 50%.
Level of Accuracy 100 %	**Level of Independence 50 %**

Teacher Initials SD

Student Documentation Form for Science Inquiry Construct

☐ Check box if Student Product or Photo Evidence Documentation form is attached.

Student Name: Fredrik	**Grade: 11**	**Date: 3/17**	**Data Collection Period: 1___ 2___ 3_X_**

Science Domain: LS ESS (PS)

Structured Performance Task (SPT)# : 11-1

Description: Student will demonstrate the Inquiry Construct within a science investigation, which includes observing/questioning, planning, conducting and analyzing.

Inquiry Construct Description: ANALYZING
Use evidence to support and/or justify interpretations and/or conclusions or explain how the evidence refutes the hypothesis.

WITHIN AAGSE # PS 1.4.1.d
Identify two or more physical changes.

Describe the four components of the SPT/science investigation (observe/question, plan, conduct, and analyze) as they are embedded in the instruction of the AAGSE:
The class is conducting a science investigation on physical changes that occur to paper as part of an investigation on chromatography. The students participated in the science investigation as follows:

OBSERVE/QUESTION: Students listened to a lecture given by the science teacher about chromatography. After the lecture the students discussed what they thought might happen when the paper hits the water and wanted to answer the question, "What changes take place when the paper hits the water?"
PLAN: The students planned the tools and materials they will need to complete the experiment. Some items include chromatography paper, water, bin, and colored water.
CONDUCT: The students conducted the experiment and recorded the changes that they saw using a table format.
ANALYZE: After the experiment was completed, the students reviewed, discussed, and analyzed the results of their findings to determine what changes they saw.

Describe the student's application of the assessed Inquiry Construct within the science investigation: Fredrik was evaluated on his use of his data (evidence) to support whether his hypothesis was correct. Fredrik hypothesized that the paper would change. Based on the data, Fredrik concluded that the paper did change during the experiment.

Evaluation of Student's Performance

Evaluate the student's accuracy performance on the Inquiry Construct. Explain how percentages were determined.	**Evaluate the student's independence performance on the Inquiry Construct. Explain how percentages were determined.**
Fredrik looked at the data he collected and drew a conclusion that his hypothesis was correct and that the paper underwent change during the experiment. Fredrik accurately used his data to prove his hypothesis, resulting in 100% accuracy in using his data.	Fredrik required a gestural prompt to use his evidence in one out of four paper changes, but was independent in three out of four opportunities to use his evidence to prove his hypothesis.
Level of Accuracy 100 %	**Level of Independence 75 %**

Teacher Initials SD

Data Summary Sheet for Science
Knowledge Entry

Student: **Fredrik** **Grade**: 11

Science	**Structured Performance Task 11-1** **Description:** Student will demonstrate the Inquiry Construct within a science investigation, which includes observing/questioning, planning, conducting and analyzing.				**Inquiry Construct Description: ANALYZING** Use evidence to support and/or justify interpretations and/or conclusions or explain how the evidence refutes the hypothesis.							
	Domain: **LS** AAGSE# LS1.1.1 Distinguish between living and non-living things.				Domain: **ESS** AAGSE# ESS2.1.1 Identify the major effects the sun has on the earth.				Domain: **PS** AAGSE# PS 1.4.1.d Identify two or more physical changes			
	Collection Period 1 **Oct. 6– Nov. 14, 2008**				**Collection Period 2** **Jan. 12 – Feb. 6, 2009**				**Collection Period 3** **March 16 – April 9, 2009**			
Date	10/11	10/24	11/10		1/14	1/24	2/05		3/20	3/27	4/11	
Data Type	DP	SDF	DP		DP	DP	SDF		SDF	DP	DP	
Accuracy %	75	100	86		85	85	100		100	100	100	
Independence %	75	80	0		85	85	80		50	100	100	
Average % for Collection Period	Accuracy: 87				Accuracy: 90				Accuracy: 100			
	Independence: 52				Independence: 83				Independence: 83			

Average % across all three collection periods	Accuracy: 92
	Independence: 73

Data Type Key: DP= Data Point SDF=Student Documentation Form

Student Documentation Form for Science Knowledge Entry

☑ Check box if Student Product or Photo Evidence Documentation form is attached.

Student Name: Fredrik	**Grade: 11**	**Date: 10/24**	**Data Collection Period: 1_X__ 2___ 3___**
Science Domain: (LS) ESS PS **Structured Performance Task (SPT)# : 11-1** **Description:** Student will demonstrate the Inquiry Construct within a science investigation, which includes observing/questioning, planning, conducting and analyzing.		**AAGSE# LS1.1.1** **Description**: Distinguish between living and non-living things.	

Describe the four components of the SPT/science investigation (observe/question, plan, conduct, and analyze) as they are embedded in the instruction of the AAGSE:

The class is currently working on a unit on determining if something is a living or non-living thing. The students participated in the science investigation as follows:

OBSERVE/QUESTION: Students researched the characteristics of living things (grow, move, and reproduce), and non-living things by looking on the internet. The students observed photos of 5 objects on a website and discussed the characteristics they observed.

PLAN: Based on what they learned through their research, the students planned the objects/photos of objects they would "test" and developed a chart including whether an object,grows, moves and reproduces to capture their findings.

CONDUCT: Students conducted the experiments on their objects with a lab partner; using manipulative cards and then converting these into a Lab Report Data sheet.

ANALYZE: Students analyzed their findings and discussed their reasoning for charting the object as "living" or "non-living". After completing the experiment, the students concluded if their hypothesis was correct or incorrect by reviewing their hypothesis chart and marking whether their theory was correct or not correct based on their evidence.

Describe the student's application of the assessed AAGSE within the SPT/science investigation:

Fredrik demonstrated his ability to distinguish between living and non-living things through completion of his Lab Report. Fredrik had to use his data on whether or not an object could, grow, move and reproduce to determine whether or not an object was a living thing.

Evaluation of Student's Performance

Evaluate the student's accuracy performance on the AAGSE. Explain how percentages were determined.	**Evaluate the student's independence performance on the AAGSE. Explain how percentages were determined.**
There were 10 opportunities to evaluate Fredrik's ability to distinguish between living and non-living things. Fredrik correctly identified either living or non-living in 10/10 opportunities, yielding a 100% accuracy.	Fredrik was independent in distinguishing between living and non-living things in 8/10 opportunities for an independence score of 80%.
Level of Accuracy 100% %	**Level of Independence 80 %**

Teacher Initials SD

Name Fredrik Date 10/24

Living/Non-Living
Lab Report Data

Object	Grow	Move	Reproduce	Living	Non-Living
Pencil					✓ C I
Rock		✓			✓ C I
Mouse	✓	✓	✓	✓	C I
Ruler					✓ C I
Dog	✓	✓	✓	✓	C I
Cat	✓	✓	✓	✓	C I
Car		✓			✓ C (✓)
Bird	✓	✓	✓	✓	C I
Stuffed Bear		✓			✓ C (✓)
Calculator		✓			✓ C I
					I = 8/10
					✓ = 2/10

SD

Student Documentation Form for Science Knowledge Entry

☐ Check box if Student Product or Photo Evidence Documentation form is attached.

Student Name: Fredrik	**Grade: 11**	**Date: 2/05**	**Data Collection Period: 1___ 2_X__ 3___**
Science Domain: LS (ESS) PS **Structured Performance Task (SPT)# : 11-1** **Description:** Student will demonstrate the Inquiry Construct within a science investigation, which includes observing/questioning, planning, conducting and analyzing.		**AAGSE #** ESS2.1.1 **Description:** Identify the major effects the sun has on the earth.	

Describe the four components of the SPT/science investigation (observe/question, plan, conduct, and analyze) as they are embedded in the instruction of the AAGSE:

Fredrik's class is involved in a science class within his school community. The class is working on The Greenhouse Effect and its principles and vocabulary. The students participated in the science investigation as follows:

OBSERVE/QUESTION: During this experiment, the students observed a greenhouse and how the sun affected the greenhouse.

PLAN: The students planned how they can make a small greenhouse with a box, decided where they should put their box greenhouse, and how they would record their data.

CONDUCT: Students made 2 greenhouses each and recorded the data from each greenhouse (placed side by side). Students were given a chart to record their temperature data in the classroom and in their greenhouse, and whether the sun was out every day.

ANALYZE: After the experiment was completed, the students analyzed the results of their findings. The students examined the relationship between the increase of the average daily temperature and the increase in the temperature in their simulated greenhouse (convection) and answered 5 questions regarding the major effects the sun had on their greenhouse (earth).

Describe the student's application of the assessed AAGSE within the SPT/science investigation:

Fredrik completed a lab report in which he answered 5 questions about the effect of the sun on the earth (e.g. Does the sun make the earth warmer or colder?).

Evaluation of Student's Performance

Evaluate the student's accuracy performance on the AAGSE. Explain how percentages were determined.	**Evaluate the student's independence performance on the AAGSE. Explain how percentages were determined.**
Fredrik completed his lab report by correctly answering the 5 questions related to the effects of the sun on the earth, yielding 100% accuracy.	Fredrik independently answered 4/5 questions on the effects of the sun, but needed a verbal prompt on one question, yielding 80% independence.
Level of Accuracy____100_____%	**Level of Independence ____80_____%**

Teacher Initials ___SD_____

Student Documentation Form for Science Knowledge Entry

☐ Check box if Student Product or Photo Evidence Documentation form is attached.

Student Name: Fredrik	**Grade: 11**	**Date: 3/20**	**Data Collection Period: 1___ 2___ 3__X_**
Science Domain: LS ESS (PS) **Structured Performance Task (SPT)# : 11-1**		**AAGSE # PS 1.4.1.d** **Description:** Identify two or more physical changes	

Describe the four components of the SPT/science investigation (observe/question, plan, conduct, and analyze) as they are embedded in the instruction of the AAGSE:

The class is conducting a science investigation on physical changes that occur to paper as part of an investigation on chromatography. The students participated in the science investigation as follows:

OBSERVE/QUESTION: Students listened to a lecture, given by the science teacher about chromatography. After the lecture they were asked "What changes take place when the paper hits the water?"

PLAN: The students planned the tools and materials they will need to complete the experiment. Some items include chromatography paper, water, bin, and colored water.

CONDUCT: The students conducted the experiment and recorded the changes that they saw using a table format.

ANALYZE: After the experiment was completed, the students reviewed, discussed and analyzed the results of their findings to determine what changes they saw.

Describe the student's application of the assessed AAGSE within the SPT/science investigation:

While conducting the experiment, Fredrik had to record the changes they observed to the paper. Fredrik had 4 opportunities to identify whether or not there was a change (one for each of his lab partner's papers).

Evaluation of Student's Performance

Evaluate the student's accuracy performance on the AAGSE. Explain how percentages were determined.	**Evaluate the student's independence performance on the AAGSE. Explain how percentages were determined.**
Fredrik correctly identified the changes in the paper in 4 of 4 opportunities, yielding 100% accuracy.	Fredrik independently identified the paper changes in 2 of 4 opportunities, and needed a verbal prompt to identify the changes in 2 or 4 opportunities. His independence was 50%.
Level of Accuracy____100_____%	**Level of Independence ____50_____%**

Teacher Initials ___SD____